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<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/696,022	KOYASU, TAKAHISA	
	<b>Examiner</b>	<b>Art Unit</b>	
	Phuong Phu	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Amendment filed on 2/22/07.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____    | 7. <input type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|  | 9. <input type="checkbox"/> Other _____   |

### **DETAILED ACTION**

1. This Office Action is responsive to the Amendment filed on 2/22/07. Accordingly, claims 1-20 are currently pending.

### **REASONS FOR ALLOWANCE**

2. Claims 1-20 are allowed.
3. The following is an examiner's statement of reasons for allowance:

-Regarding to independent claim 1, none of prior art or record teaches or suggests a serial communication transceiver comprising: a trapezoidal wave signal generation circuit for producing a trapezoidal wave signal to be transmitted to a communication line in responsive to a control signal, wherein the trapezoidal wave signal generation circuit includes means for decreasing harmonic components in the trapezoidal wave signal and for suppressing noise superimposed on the trapezoidal wave signal; and a receiver circuit for receiving another trapezoidal wave signal over the communication line, wherein the receiver circuit includes: a waveform shaping circuit for shaping the another trapezoidal wave signal waveform received over the communication line to thereby logically bi-level the signal into two logical levels; and a filter circuit for receiving the logically bi-leveled signal and for releasing a resultant 2-level signal, wherein the filter circuit has a filtering time at the rise of the logically bi-leveled signal substantially equal to a filtering time at the fall of the logically bi-leveled signal.

-Regarding to independent claim 4, none of prior art or record teaches or suggests a filter circuit for an input signal having two logical levels, the filter circuit comprising: a current mirror circuit comprised of a first and second transistors having their control electrodes connected to each other; a first constant current circuit connected to the first transistor; a filtering capacitor;

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a second constant current circuit which produces a constant current which is  $1/N$  ( $N>1$ ) of a constant current flowing through the second transistor which is connected in series to the filtering capacitor; an offset voltage generation circuit which is connected between one terminal of the filtering capacitor on which the constant current from the second constant current circuit flows in and the second transistor; and a logical bi-leveling circuit for producing an output signal having two logical levels based on the voltage between the terminals of the filtering capacitor.

-Regarding to independent claim 13, none of prior art or record teaches or suggests a trapezoidal wave signal generation circuit comprising: a capacitor connected to a first power supply line for generating a trapezoidal wave signal; a first current output circuit connected to a second power supply line for conducting a charge current to the capacitor; a second current output circuit for conducting a discharge current that is twice the charge current, wherein the second current output circuit conducts the discharge current from the capacitor when a waveform control signal is at a first level, and halts the current conduction when the waveform control signal is at a second level; and a current control circuit for controlling the first and second current output circuits based on a comparison of the voltage between the terminals of the capacitor with a plurality of threshold voltages such that a voltage difference between the capacitor terminal voltage and the voltage of the first or second power supply line corresponds to the charge and discharge currents of the capacitor.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

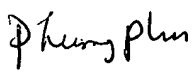
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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Phu whose telephone number is 571-272-3009. The examiner can normally be reached on M-F (8:00 AM - 4:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Phuong Phu  
03/09/07

**PHUONG PHU**  
**PRIMARY EXAMINER**

Phuong Phu  
Primary Examiner  
Art Unit 2611